



Professional Engineers
and Geoscientists of BC

2008 Compensation Survey

SAMPLE BENCHMARK EMPLOYMENT DESCRIPTIONS AND CORRESPONDING RATINGS

May 15, 2008

This document contains Benchmark Employment Descriptions and their corresponding Employment Responsibility Evaluation point scores to be used as a reference check when determining one's own Employment Responsibility Evaluation.

Employment evaluation is difficult to undertake without guidance from an experienced employment analyst. To assist APEGBC members in determining their level of responsibility, sample benchmark employment descriptions have been developed.

Positions range from the most junior to that of a fairly senior manager. As your employment will not match exactly with any of these, the points you give your position will vary from the benchmark samples evaluated, both on the various factors and in total points.

These benchmark descriptions and point scores are intended to help guide members when refining their own evaluations.

SAMPLE BENCHMARK EMPLOYMENT DESCRIPTIONS AND CORRESPONDING RATINGS

ENGINEER-IN-TRAINING	DESIGN ENGINEER	JUNIOR GEOSCIENTIST																																																																								
<p>Summary For training and development in various phases of engineering work in office, sales, plant, field or laboratory, performs various assigned tasks of comparatively low complexity, normally assisting other engineers.</p>	<p>Summary Assists in the design of new or revised products, equipment, installations, or processes, based on established engineering principles to meet functional requirements or performance specifications. Using a variety of standard engineering methods and techniques, will usually handle design problems of moderate complexity or assist more senior engineers to solve difficult problems.</p>	<p>Summary Assists in the accumulation, analysis and interpretation of geological, geophysical or geochemical data. Keeps up to date on current activities in the industry.</p>																																																																								
<p>Duties – Performs a variety of tasks such as the preparation of simple plans, designs, calculations, costs and bills of material, catalogues, in accordance with established codes, standards, drawings or other specifications.</p>	<p>Duties Receives assignments of limited scope and complexity, usually minor phases of broader assignments that may include one or more of: – The design of components within the particular branch of engineering (civil, mechanical, electrical, etc.) of a larger design project. – The modification of tooling, plant equipment, imported designs or prototypes of new development, to permit economical manufacturing or to meet performance specifications and requirements or serviceability. – The design of ancillary parts, not within the particular branch of engineering or equipment pertaining to the branch (e.g., foundations and supports for heavy machinery, transports for heavy machinery, transformer housings, etc.). – Confers with shop and departmental personnel while gathering information, seldom outside the company. May prepare reports such as equipment surveys, cost estimates, process investigations, within the scope of assigned work.</p>	<p>Duties – Maintains appropriate databases. Suggests field or laboratory programs to the immediate supervisor. – Makes field studies as assigned and prepares both surface and subsurface maps. – Performs laboratory examinations of samples and cores in relation to field studies. – Assists with the accumulation and analysis of geoscience data for an exploratory and/or drilling program. – As requested, guides the work and assists in the training of first-year geoscientists. – Assists the immediate supervisor to keep informed in current activities of the industry that might affect company performance.</p>																																																																								
<p>Recommendations, Decisions and Commitments Normally decisions that are made will be of a routine nature invariably having ample precedent or in line with clearly defined procedures.</p>	<p>Recommendations, Decisions and Commitments Recommendations are limited to the solution of the problems rather than the end results. Work requires accuracy in calculations, completeness of data and adherence to prescribed testing, analysis, design or computation methods. Refers unusual problems to more senior engineers. Errors in work would usually be detected before results become serious.</p>	<p>Recommendations, Decisions and Commitments Recommendations limited to the solution of immediate problems relating to a phase of a project. Decisions relate to the selection of data and the application of techniques. Such judgments are normally made by following established guidelines and practice. Refers unusual problems to more senior geoscientists.</p>																																																																								
<p>Supervision Received Works under supervision where the work is reviewed for accuracy, adequacy and conformance with prescribed procedures.</p>	<p>Supervision Received Tasks and duties are assigned in detail and work is under close review by more senior engineers.</p>	<p>Supervision Received Work is assigned in detail and the incumbent works under close supervision. Work is normally checked for accuracy and completeness.</p>																																																																								
<p>Leadership Authority May give work assignments and check work of 1–5 technicians or helpers.</p>	<p>Leadership Authority May check the work of one or two junior engineers or draftsmen.</p>	<p>Leadership Authority May check the work of one or two more junior geoscientists and assist them with the application of standard techniques and the interpretation of data.</p>																																																																								
<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent; little or no practical experience.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent, normally with two to three years, working experience from the graduation level.</p>	<p>Guide to Entrance Qualifications Appropriate B.Sc. degree, normally with two years of relevant experience since graduation.</p>																																																																								
<p>Job Rating Factor</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Duties</td><td style="text-align: right;">20</td></tr> <tr><td>Education</td><td style="text-align: right;">65</td></tr> <tr><td>Experience</td><td style="text-align: right;">25</td></tr> <tr><td>Recommendations</td><td style="text-align: right;">45</td></tr> <tr><td>Supervision Received</td><td style="text-align: right;">25</td></tr> <tr><td>Supervision Exercised</td><td style="text-align: right;">5</td></tr> <tr><td>Management Scope</td><td style="text-align: right;">0</td></tr> <tr><td>Physical Demands</td><td style="text-align: right;">10</td></tr> <tr><td>Job Environment</td><td style="text-align: right;">5</td></tr> <tr><td>Absence from Base</td><td style="text-align: right;">0</td></tr> <tr><td>Accident and Health Hazards</td><td style="text-align: right;">5</td></tr> <tr><td>Total Points</td><td style="text-align: right;">205</td></tr> </table>	Duties	20	Education	65	Experience	25	Recommendations	45	Supervision Received	25	Supervision Exercised	5	Management Scope	0	Physical Demands	10	Job Environment	5	Absence from Base	0	Accident and Health Hazards	5	Total Points	205	<p>Job Rating Factor</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Duties</td><td style="text-align: right;">40</td></tr> <tr><td>Education</td><td style="text-align: right;">65</td></tr> <tr><td>Experience</td><td style="text-align: right;">45</td></tr> <tr><td>Recommendations</td><td style="text-align: right;">50</td></tr> <tr><td>Supervision Received</td><td style="text-align: right;">30</td></tr> <tr><td>Supervision Exercised</td><td style="text-align: right;">10</td></tr> <tr><td>Management Scope</td><td style="text-align: right;">0</td></tr> <tr><td>Physical Demands</td><td style="text-align: right;">10</td></tr> <tr><td>Job Environment</td><td style="text-align: right;">0</td></tr> <tr><td>Absence from Base</td><td style="text-align: right;">0</td></tr> <tr><td>Accident and Health Hazards</td><td style="text-align: right;">0</td></tr> <tr><td>Total Points</td><td style="text-align: right;">250</td></tr> </table>	Duties	40	Education	65	Experience	45	Recommendations	50	Supervision Received	30	Supervision Exercised	10	Management Scope	0	Physical Demands	10	Job Environment	0	Absence from Base	0	Accident and Health Hazards	0	Total Points	250	<p>Job Rating Factor</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Duties</td><td style="text-align: right;">40</td></tr> <tr><td>Education</td><td style="text-align: right;">65</td></tr> <tr><td>Experience</td><td style="text-align: right;">40</td></tr> <tr><td>Recommendations</td><td style="text-align: right;">50</td></tr> <tr><td>Supervision Received</td><td style="text-align: right;">30</td></tr> <tr><td>Supervision Exercised</td><td style="text-align: right;">10</td></tr> <tr><td>Management Scope</td><td style="text-align: right;">0</td></tr> <tr><td>Physical Demands</td><td style="text-align: right;">10</td></tr> <tr><td>Job Environment</td><td style="text-align: right;">5</td></tr> <tr><td>Absence from Base</td><td style="text-align: right;">5</td></tr> <tr><td>Accident and Health Hazards</td><td style="text-align: right;">5</td></tr> <tr><td>Total Points</td><td style="text-align: right;">260</td></tr> </table>	Duties	40	Education	65	Experience	40	Recommendations	50	Supervision Received	30	Supervision Exercised	10	Management Scope	0	Physical Demands	10	Job Environment	5	Absence from Base	5	Accident and Health Hazards	5	Total Points	260
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ELECTRICAL DESIGN ENGINEER	MANUFACTURING ENGINEER	SENIOR GEOSCIENTIST																																																																								
<p>Summary Performs assigned duties associated with electrical layout design of projects. These projects include complete substation and diesel station layouts, proposals for the same and modifications to those stations. Will use a variety of standard engineering methods and techniques and will assume responsibility for moderately complex layouts.</p>	<p>Summary Performs a variety of engineering tasks including the development of plant layouts, work methods and manufacturing processes; designing tools; selecting, procuring and installing machines, tools and material-handling equipment; establishing standard time value for production and non-production operations.</p>	<p>Summary Conducts special geoscience studies and makes recommendations based on the findings. Conducts geological, geophysical or geochemical investigations on problems that have been approved for study. May carry out programs necessary for the development of proven and semi-proven discoveries.</p>																																																																								
<p>Duties The electrical engineering work includes:</p> <ul style="list-style-type: none"> - preparing preliminary, and detailed electrical layout, other than that performed by Protection and Control, based on Assignment Sheets and one-line diagrams supplied by client; - liaising with Civil Engineering Section to achieve compatibility of respective proposals; - writing specifications, usually for installation work; - checking information provided by contractors who are bidding on contracts to ensure adequacy of proposals and recommending contract awards based on that information, past experience with the contractor, capability (equipment, etc.) and price; - investigating complaints, re: design received from the field during construction and from operating staff following construction, and making design changes if justified; - making design calculations as required applying standardized details and devising nonstandard details as necessary; and - reviewing manufacturers' drawings on request by the Equipment and Materials Branch. 	<p>Duties Under general direction, makes independent studies, analysis, interpretations and conclusions in one or a combination of the following assignments:</p> <ul style="list-style-type: none"> - Process Engineering – determines tools, equipment and dies required for shaping, finishing and assembling an assigned product, thus planning the sequence of operations. - Machine and Tool Design – designs and develops machinery, machine tools, gages, dies, jigs, fixtures and special tools required as most suitable to the prescribed volume of production, materials and surfaces. - Gage Design – develops special gages and instruments and applies statistical methods in order to attain precision specified. - Plant or Layout Engineering – arranges machines, lays out plant facilities and setups to ensure the most efficient and productive layout. Designs material-handling methods. Develops, designs and recommends long- and short-term plans for maintenance, repair and expansion of buildings, equipment and facilities including power plant and utilities. - Time and Motion Study – makes studies to determine standard rates and eliminate waste of time, labour and materials. - Quality Control – develops, recommends and administers quality control techniques. Utilizes industrial statistics for the presentation and analysis of quality control and other manufacturing data. Prepares cost estimates, makes studies of feasibility and provides information, advice and engineering assistance within the scope of assigned work. 	<p>Duties</p> <ul style="list-style-type: none"> - Prepares, and reviews with senior personnel, recommendations for special geological, geophysical or geochemical studies, which may involve recommendations for property acquisition or exploratory drilling. - Assists in making economic analyses or other comparable evaluations relevant to further planning decisions. - Collaborates with other company personnel, as appropriate, in matters of mutual interest. - Maintains contacts with external geoscience personnel, associations and others. 																																																																								
<p>Recommendations, Decisions and Commitments Recommendations will include complete solutions within the scope of the job. Unusual problems and techniques of a novel nature will normally be referred to the senior engineer.</p>	<p>Recommendations, Decisions and Commitments Recommendations and decisions are usually based on operational experience. Work is relied upon as sound and authoritative within the scope of an assignment. Difficult, complex or unusual decisions are usually referred to higher authority. Errors of judgment could cause serious loss of manufacturing time and material.</p>	<p>Recommendations, Decisions and Commitments Recommendations are usually based on operational experience and are relied upon as sound and authoritative within the scope of an assignment. Errors of judgment could have significant financial consequences.</p>																																																																								
<p>Supervision Received Projects are assigned and work will be reviewed in detail by more senior engineers.</p>	<p>Supervision Received Work is not generally supervised in detail and the amount of supervision varies depending upon the assignment. More senior supervision is usually available to review work programs and give guidance.</p>	<p>Supervision Received Work not generally supervised in detail. Consultation with more senior geoscientists is available when required.</p>																																																																								
<p>Leadership Authority Checks the work of one or two junior engineers and technicians.</p>	<p>Leadership Authority May guide the work of several more junior engineers or technicians when they are employed on the same projects.</p>	<p>Leadership Authority May guide the work of several more junior geoscientists and/or technologists when they are assigned to the same project.</p>																																																																								
<p>Guide to Entrance Qualifications Bachelor's degree in Applied Science or its equivalent, normally with three years' working experience since graduation.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent, normally with three to five years of related working experience from the graduation level.</p>	<p>Guide to Entrance Qualifications Appropriate B.Sc. degree, normally with three to five years' working experience since graduation.</p>																																																																								
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CONSTRUCTION DESIGN ENGINEER	SALES ENGINEER	SPECIALIST GEOSCIENTIST
<p>Summary In a specialized field of experience within a branch of engineering (e.g. Civil, Mechanical, Electrical, etc.) develops design for complicated components of engineering works, structures, installations and processes. Develops plans for the modification and extension of existing facilities.</p>	<p>Summary Responsible for field sales of apparatus and other delegated products to prospective and established customers. Discusses product application with a good knowledge of customers' technical problems. Determines customers' requirements and takes orders or reports to own department. Expedites deliveries and follow-up to ensure satisfaction.</p>	<p>Summary Conducts comprehensive geological, geophysical or geochemical studies and prepares recommendations that form the basis for significant corporate decisions.</p>
<p>Duties</p> <ul style="list-style-type: none"> - Makes independent studies, analysis, interpretations and conclusions within the scope of various assigned projects. - May design structural frames in steel reinforced concrete, timber, make layouts and designs of municipal services, industrial buildings, mining plants. - May design mechanical or electrical services of buildings, material-handling installations, power installations, industrial drives. - May be concerned with the design of communications circuitry or power generation and/or transmission, including repeater stations or transformer substations. - May be concerned with the design of chemical or metallurgical process plant installations. - Based on knowledge of site conditions, methods and materials available, time factors and costs, works up a design and/or alternative designs to achieve the desired end, recommending optimum solution. - Prepares reports, cost estimates, specifications. - Consults with and provides specialized instruction for Drafting Department in respect of design notes and sketches. - Confers with more senior design engineers and one of a design project team and with Manufacturing and Purchasing people in the company, as necessary to exchange information. - Confers with senior members of consultant's (or client's) organization; with contractors and suppliers. 	<p>Duties</p> <ul style="list-style-type: none"> - Visits new or prospective customers to discuss products on the basis of the company's experience in similar fields and a knowledge of the customer's technical requirements. - Investigates product applications, recommends modifications; ensures proper servicing; proposes adjustments as required. - For fairly standardized products and adaptation, quotes prices, terms and deliveries. - May conduct correspondence on product applications and adjustments. - Transmits all pertinent information to Sales Department to facilitate cost-estimating, proper design or modifications where necessary, and ensures that the requirements will be met. - Acts as technical consultant to customers on their problems to ensure best use of the company's products. May participate in the sales planning of the department. - May be required to travel extensively and to entertain customers' representatives. 	<p>Duties In collaboration with other company personnel:</p> <ul style="list-style-type: none"> - Prepares and reviews with senior personnel recommended strategies for furthering the corporate objectives. - Synthesizes geoscience data, possibly incorporating other relevant information, in order to recommend appropriate development procedures. - Prepares and/or supervises the preparation of interpretations, including surface and subsurface maps, as aids to the making of decisions for further development. - Maintains contact with outside geoscience personnel, associations and others in order to keep up to date on current events in the industry. - Assists in making, or makes, economic analyses pertaining to exploration and development, acquisition of properties or other comparable activities.
<p>Recommendations, Decisions and Commitments Assignments are responsible and varied. Within the scope of an assignment, work is relied upon as sound and authoritative. Recommendations and decisions are usually based on precedent. Difficult, complex or unusual decisions are usually referred to more senior authority. Errors of judgment might cause serious losses.</p>	<p>Recommendations, Decisions and Commitments Within the scope of the assigned working area, work is relied upon by customers and employer superiors as accurate and sound. Recommendations and decisions are usually based on precedent. Difficult, complex or unusual decisions are usually referred to more senior authority. Errors of judgment might cause serious losses to a customer, which could result in large losses to the employer.</p>	<p>Recommendations, Decisions and Commitments Recommends to senior personnel in the organization, lease acquisitions, geoscience investigations, exploratory well programs and technical studies to further the corporate objectives.</p>
<p>Supervision Received Work is not generally supervised in detail and the amount of supervision varies with the assignment. Usually more senior supervision is available to review work programs to give guidance.</p>	<p>Supervision Received Work is not generally supervised in detail and the amount of supervision varies with the assignment. Usually more senior supervision is available to review work programs to give guidance.</p>	<p>Supervision Received General supervision is provided. Work is assigned in terms of well-defined objectives and the results desired. Informed guidance is readily available.</p>
<p>Leadership Authority May guide the work of several more junior engineers or technicians when they are employed on the same projects.</p>	<p>Leadership Authority May guide the work of several more junior sales engineers or technicians.</p>	<p>Leadership Authority Supervision is incidental to other work performed. May train and direct junior professionals and technologists in work methods relating to assigned projects. May allocate and check work for accuracy and completeness. May assist in the training and development of geoscience personnel.</p>
<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent; normally with three to five years of related working experience from the graduation level.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent; normally with three to five years' related working experience from the graduation level.</p>	<p>Guide to Entrance Qualifications B.Sc. in Geology, Geophysics or Geochemistry with normally five to ten years' related experience, or a Master's degree in Geology, Geophysics or Geochemistry with four to six years of related experience.</p>
<p>Job Rating Factor</p> <ul style="list-style-type: none"> Duties 55 Education 65 Experience 50 Recommendations 63 Supervision Received 40 Supervision Exercised 15 Management Scope 8 Physical Demands 10 Job Environment 3 Absence from Base 0 Accident and Health Hazards 3 Total Points 312 	<p>Job Rating Factor</p> <ul style="list-style-type: none"> Duties 70 Education 65 Experience 50 Recommendations 63 Supervision Received 40 Supervision Exercised 15 Management Scope 5 Physical Demands 5 Job Environment 0 Absence from Base 10 Accident and Health Hazards 0 Total Points 323 	<p>Job Rating Factor</p> <ul style="list-style-type: none"> Duties 70 Education 65 Experience 70 Recommendations 80 Supervision Received 45 Supervision Exercised 20 Management Scope 3 Physical Demands 8 Job Environment 0 Absence from Base 5 Accident and Health Hazards 3 Total Points 369

PRODUCTION ENGINEER	PROJECT ENGINEER	SUPERVISING ENGINEER
<p>Summary Directs the operation of two or more production units comprising a distinct area or segment of the total process, each unit being supervised by a foreman or a series of foremen, one or more of whom may be an engineer. Maintenance and control systems based on engineering principles, as well as the susceptibility of the process to variations from standard, require an engineering background for sustained successful direction of the operation.</p>	<p>Summary Acts in a staff roll in the design of buildings and machinery. Coordinates design work of subordinates and supervises construction in the course of duties, may supervise a group of 10 other engineers, technicians and draftsmen.</p>	<p>Summary Supervises an engineering group of up to about 10 professional and/or nonprofessional technical people performing a variety of duties, normally in a single field of engineering, e.g., structural design, mechanical design, electrical design or concerned with a single product design.</p>
<p>Duties</p> <ul style="list-style-type: none"> - Instructs foremen regarding objectives. Participates with technical control, development, design and maintenance engineers in analyzing off-standard conditions and the feasibility of new procedures. - Accountable for quality, quantity, cost, safety and employee relations in the area under direction. 	<p>Duties</p> <ul style="list-style-type: none"> - Prepares studies and financial analysis of proposed capital expenditures. Advises management on choice of equipment and process design for these expenditures. - Prepares specifications and orders for material and machinery for new installation. - Designs buildings and machinery, assisted by subordinates. - Prepares contracts, advises on choice of contractors, directs and supervises the selected contractors. Evaluates machinery. - Controls the project until it is completed. 	<p>Duties</p> <ul style="list-style-type: none"> - Plans detailed methods of solving assigned problems such as: the design of new structures; modifications or additions to existing structures; project concerned with product improvements, manufacturing method changes, equipment or process changes. - Delegates components to staff, sees the work through to meet schedules and coordinates assignments with other groups. - Prepares or requests preparation of design notes, drawings, specifications and occasionally prototypes or models. - May give technical direction to construction or installation or design projects to ensure adherence to specifications. - Prepares or requests preparation of cost estimates, engineering studies and reports as required. - Responsible for the maintenance of engineering office files, equipment and procedures. - Confers as required with senior engineers and management of the company, occasionally with contractors, consultants and suppliers.
<p>Recommendations, Decisions and Commitments Recommends improvements in procedures and changes in policy. Participates in formulation of policy. Approves transfers and promotions. Recommends salary increases. May approve wage rate changes. Major problems normally referred to higher supervision but in emergency must be decided directly and quickly.</p>	<p>Recommendations, Decisions and Commitments Recommendations include choice among alternatives in design, machinery and process. Will be required to devise new approaches to methods of reaching solutions. Errors could cause extra expenditures in money or time.</p>	<p>Recommendations, Decisions and Commitments Recommendations will normally relate to alternatives in design or use of different materials to achieve the same purpose and are subject to review to ensure accordance with overall plans and company policies. Modifies existing engineering criteria as occasion demands by devising new approaches to the solution of problems. Errors could cause delays, possibly extending into areas where expenditures might be involved.</p>
<p>Supervision Received Daily contact with next level of supervision shared with other area supervisors.</p>	<p>Supervision Received Works under general direction and guidance in order to reach objectives. Reacts to priorities. Cooperates with peer groups.</p>	<p>Supervision Received Works under general direction and guidance following instructions relating to objectives, relative priorities and necessary cooperation with other units.</p>
<p>Leadership Authority General supervision over area. Available for consultation by subordinates on 24-hour basis, but normally constantly available during day shift only.</p>	<p>Leadership Authority Outlines work for subordinates and review of adequacy. Responsible for those assigned to him on a permanent or temporary basis. Acts as company representative in dealing with contractors.</p>	<p>Leadership Authority Makes recommendations concerning selection and termination, and is responsible for the training, rating and discipline of staff. Outlines and assigns work, and reviews it for technical adequacy.</p>
<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent, normally with five to eight years' experience from graduation, preferably including three to five years in a supervisory capacity.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Applied Science or the equivalent, normally with seven to 10 years' experience in the related field since graduation.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent, normally with five to eight years' experience related to the type of work since graduation.</p>
<p>Job Rating Factor</p> <ul style="list-style-type: none"> Duties 70 Education 65 Experience 70 Recommendations 80 Supervision Received 45 Supervision Exercised 20 Management Scope 5 Physical Demands 8 Job Environment 0 Absence from Base 5 Accident and Health Hazards 3 Total Points 371 	<p>Job Rating Factor</p> <ul style="list-style-type: none"> Duties 90 Education 65 Experience 70 Recommendations 80 Supervision Received 55 Supervision Exercised 20 Management Scope 10 Physical Demands 5 Job Environment 0 Absence from Base 0 Accident and Health Hazards 0 Total Points 395 	<p>Job Rating Factor</p> <ul style="list-style-type: none"> Duties 90 Education 65 Experience 70 Recommendations 80 Supervision Received 55 Supervision Exercised 40 Management Scope 10 Physical Demands 5 Job Environment 0 Absence from Base 0 Accident and Health Hazards 0 Total Points 415

SUPERVISING HIGHWAY CONSTRUCTION ENGINEER	SENIOR ENGINEERING SPECIALIST	SENIOR PRODUCTION ENGINEER																																																																								
<p>Summary Supervises highway construction project. Responsible for hiring, firing, promotion, training and discipline of about 70 professional and other subordinates. Designs certain non-complex structures. Department representatives in control of contractor's work.</p>	<p>Summary Under administrative and/or high technical direction, works as a senior engineer specialist or consultant in a particular field of engineering development or research. Participates in planning, organizes work methods and procedures. Makes independent decisions within own sphere, usually exercising technical authority over a small group of engineer specialists.</p>	<p>Summary Directs the operation of two or more complex continuous processes, i.e., chemical, mining, etc., producing large quantities of product with reliance upon engineering control and maintenance systems.</p>																																																																								
<p>Duties</p> <ul style="list-style-type: none"> - Through subordinates, supervises field crews and control equipment. Administers the personnel aspect for group. - Ensures that contractors observe the terms of the contract and adhere to the specifications. Authorizes changes to specifications where necessary and negotiates bids for work not covered by the contract. - Liaises between own crew or contractors and other agencies or groups. - Designs certain structures such as retaining walls, culverts and super-span culverts. - Checks claims from contractors when these refer to extras or alterations to contract. 	<p>Duties</p> <ul style="list-style-type: none"> - Provides specialized advice of an advanced technological nature for the solution of specific problems. - Participates in planning by providing original and ingenious approaches to the practical and economical solution of problems. - Within own specialized sphere, directs research into new resources, products, processes or methods. - Interprets and evaluates data obtained from various engineering and/or research investigations. - Keeps well informed of the latest technological developments relating to field of practice. - Ensures that staff morale is maintained at a high level by building a reputation for efficient planning and a high level of creative thinking. 	<p>Duties</p> <ul style="list-style-type: none"> - Plans production in coordination with other operations and customer demand. - Assists technical control personnel in establishing standards and field tests. - Coordinates, specifies and schedules production and maintenance. Analyzes and corrects off-standard conditions with specialized technical assistance. - Accountable for quality, quantity, costs, safety and employee relations. 																																																																								
<p>Recommendations, Decisions and Commitments Recommendations are of broad scope in achievement of objectives. Required to make decisions in the field when plans and contract require alteration. Responsible for the overall performance of crews.</p>	<p>Recommendations, Decisions and Commitments Makes responsible decisions, subject only to highest technical review, on all matters assigned to jurisdiction. Decisions involving large sums of money or the selection of long-range objectives are usually referred to higher authority. Takes courses of action necessary to expedite the successful accomplishment of assigned projects.</p>	<p>Recommendations, Decisions and Commitments Recommends improvements in plant procedures and changes in policy. Participates in policy formulation. Approves salary increases. Has wide latitude for decisions affecting operations.</p>																																																																								
<p>Supervision Received Works from generally accepted departmental policy and from established priorities. Needs to consider relations with municipalities and other agencies affected by the construction.</p>	<p>Supervisions Received Work is assigned in terms of broad objectives to be accomplished, leaving wide authority within sphere, with virtually no technical guidance, but subject to general administrative control.</p>	<p>Supervision Received Broad direction received from Plant Manager in a small plant varying to limited supervision from Production Superintendent in a large plant.</p>																																																																								
<p>Leadership Authority Responsible for all aspects of the work of assigned subordinates.</p>	<p>Leadership Authority Gives technological advice and direction to a group of professional specialists. With an appreciation of the necessity of maintaining an atmosphere of free-thinking creativity, outlines difficult problems and methods of approach. Coordinates work programs and directs use of equipment and material.</p>	<p>Leadership Authority Directs activities of from 50 to over 200 people, depending upon complexity of operation.</p>																																																																								
<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent, normally with seven to 10 years' related experience since graduation.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalents, normally with nine to 12 years' (or Master's or other advanced degree with six or more years) of diversified research-development and/or design experience from the graduation level.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent, normally with nine to 12 years' experience from the graduation level including five to 10 years in a supervisory capacity.</p>																																																																								
<p>Job Rating Factor</p> <table border="0"> <tr><td>Duties</td><td>70</td></tr> <tr><td>Education</td><td>65</td></tr> <tr><td>Experience</td><td>80</td></tr> <tr><td>Recommendations</td><td>70</td></tr> <tr><td>Supervision Received</td><td>50</td></tr> <tr><td>Supervision Exercised</td><td>30</td></tr> <tr><td>Management Scope</td><td>35</td></tr> <tr><td>Physical Demands</td><td>10</td></tr> <tr><td>Job Environment</td><td>5</td></tr> <tr><td>Absence from Base</td><td>12</td></tr> <tr><td>Accident and Health Hazards</td><td>5</td></tr> <tr><td>Total Points</td><td>432</td></tr> </table>	Duties	70	Education	65	Experience	80	Recommendations	70	Supervision Received	50	Supervision Exercised	30	Management Scope	35	Physical Demands	10	Job Environment	5	Absence from Base	12	Accident and Health Hazards	5	Total Points	432	<p>Job Rating Factor</p> <table border="0"> <tr><td>Duties</td><td>65</td></tr> <tr><td>Education</td><td>90</td></tr> <tr><td>Experience</td><td>90</td></tr> <tr><td>Recommendations</td><td>80</td></tr> <tr><td>Supervision Received</td><td>60</td></tr> <tr><td>Supervision Exercised</td><td>40</td></tr> <tr><td>Management Scope</td><td>10</td></tr> <tr><td>Physical Demands</td><td>5</td></tr> <tr><td>Job Environment</td><td>5</td></tr> <tr><td>Absence from Base</td><td>0</td></tr> <tr><td>Accident and Health Hazards</td><td>5</td></tr> <tr><td>Total Points</td><td>450</td></tr> </table>	Duties	65	Education	90	Experience	90	Recommendations	80	Supervision Received	60	Supervision Exercised	40	Management Scope	10	Physical Demands	5	Job Environment	5	Absence from Base	0	Accident and Health Hazards	5	Total Points	450	<p>Job Rating Factor</p> <table border="0"> <tr><td>Duties</td><td>90</td></tr> <tr><td>Education</td><td>65</td></tr> <tr><td>Experience</td><td>90</td></tr> <tr><td>Recommendations</td><td>90</td></tr> <tr><td>Supervision Received</td><td>60</td></tr> <tr><td>Supervision Exercised</td><td>40</td></tr> <tr><td>Management Scope</td><td>40</td></tr> <tr><td>Physical Demands</td><td>5</td></tr> <tr><td>Job Environment</td><td>5</td></tr> <tr><td>Absence from Base</td><td>5</td></tr> <tr><td>Accident and Health Hazards</td><td>3</td></tr> <tr><td>Total Points</td><td>493</td></tr> </table>	Duties	90	Education	65	Experience	90	Recommendations	90	Supervision Received	60	Supervision Exercised	40	Management Scope	40	Physical Demands	5	Job Environment	5	Absence from Base	5	Accident and Health Hazards	3	Total Points	493
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CHIEF DESIGN ENGINEER	ENGINEERING/GEOSCIENCE MANAGER
<p>Summary Directs the staff of an engineering office and coordinates the work of the design staff with that of field staff including several professional functions.</p>	<p>Summary Manages a large staff, administers and coordinates several professional, sub-professional and/or mechanical trades functions.</p>
<p>Duties</p> <ul style="list-style-type: none"> - Plans and allocates work on broad general assignments with the limits of company policy. - Establishes working programs to attain objective in the most economical manner. - Acts as engineering consultant and advisor to the company. - Assists in developing and maintaining contacts inside and outside the company. - Makes direct contact with clients. 	<p>Duties</p> <ul style="list-style-type: none"> - Works independently on broad, general assignments with responsibility for planning associated activities, limited only by company policy. - Participates in establishing objectives and basic operating policies. Devises ways of reaching program objectives in the most economical manner and of meeting any unusual conditions affecting work progress. - Conducts the normal administrative functions related to position. - Acts as engineering/geoscience consultant and advisor to the organization. - Develops and maintains top-level contacts inside and outside the company.
<p>Recommendations, Decisions and Commitments Makes responsible decisions within the limits of company policy. Recommends changes in company policy. Implements policies affecting company expenditure and makes decisions affecting operations.</p>	<p>Recommendations, Decisions and Commitments Makes responsible decisions without reference to superiors. Implements approved major programs involving expenditures of large sums of money. Errors in judgment could cause grave losses.</p>
<p>Supervisions Received Broad direction from President or Vice President of company. Work is reviewed for adherence to company policy. Occasional review of technical matters.</p>	<p>Supervision Received Work is reviewed for accomplishment, adherence to company policy and coordination with other phases of company's operations.</p>
<p>Leadership Authority Selects, rates, disciplines and terminates staff. Reviews and evaluates technical work. Coordinates staff requirements and disposition to suit schedule of work in hand and work planned. Allocates work to various section or project heads.</p>	<p>Leadership Authority Makes decisions regarding the selection, development, rating, discipline and termination of staff. Reviews and evaluates technical work. Selects, schedules and coordinates to attain program objectives.</p>
<p>Guide to Entrance Qualifications Bachelor's degree (Honours preferred) in Engineering and broad engineering experience of 15 years or more, of which about three to five years should have been in responsible administrative duties.</p>	<p>Guide to Entrance Qualifications Bachelor's degree in Engineering or Applied Science or its equivalent, normally with broad engineering experience including responsible administrative duties.</p>
<p>Job Rating Factor</p> <p>Duties 130 Education 65 Experience 113 Recommendations 90 Supervision Received 70 Supervision Exercised 60 Management Scope 20 Physical Demands 5 Job Environment 0 Absence from Base 5 Accident and Health Hazards 3 Total Points 561</p>	<p>Job Rating Factor</p> <p>Duties 130 Education 65 Experience 138 Recommendations 105 Supervision Received 80 Supervision Exercised 60 Management Scope 40 Physical Demands 5 Job Environment 0 Absence from Base 0 Accident and Health Hazards 0 Total Points 623</p>